Next Meeting details will be emailed
Latest meeting details found on club website at
http://nevarc.org.au/

The Dark Web – Take a Peek on Page 3

News Bits

QSL SERVICE FOR NEVARC

I need 10 members of the club for us to be able to get QSL cards direct from ARV to up here in North East VK3 or ARV will <u>NOT</u> be assisting us with QSL card services.

It's a pain in the butt however I need 10 to send back.

If we do not reach 10 members applying, ARV let your cards sit around a musty old building til they are finally discarded I suspect at some stage.

I am happy to continue to act as the QSL manager and make sure cards will be at the clubrooms for collection but we need the 10 people or we don't get out past the starting post.

If you could fill in the form and return by email, even if you suspect you will never receive a QSL card, it's a numbers game and we need to meet the target to be an official ARV distribution point.

If there are others that you feel that are interested, please forward it on to them immediately as many cards are sitting down at the ARV base.

Even if you are not a member, fill in the form, we will do this as a free service as it's a disgrace if your cards are being discarded due to a lack of 10 signatures. One of the catch 22 situations is that you must be a member of the WIA or ARV to participate. Most are WIA members.

~Brenton VK3CM

DEFENCE

An Australian research project aims to develop dynamic tactical communications for the difficult land battle space environment.

Recall the scene from countless movies where the army signaller in the heat of battle calls for urgent air support. He had control, was acutely aware of the battle context and what information needed to be transmitted, and got immediate feedback about the state of the voice radio network (by the presence or lack of voice acknowledgement).

But since the advent of digitisation of the tactical network, the data deluge has become too much for humans alone to manage. There are just too many decisions to be made. Should the network be reporting enemy locations, sharing friendly force locations or requesting assistance with casualties? Calling for fire support or downloading the latest software update?

The answer is to distil the data and send the highest priority information first. Less-important data can then get through eventually.

To be able to transform the data, and to link into the radio hardware, the SMARTNet team is calling on the skills of others in the field. A partnership has been established with US Army Research Labs (ARL) scientists who are now conducting research under the SMARTNet banner. "Let me emphasise, the reason this hasn't been done before in any other country is that dynamically prioritising information over a tactical network is difficult. How can we find out what the network is doing without clogging it up?" a spokesperson has said. To solve these challenges, the SMARTNet team has been doing some deep thinking, in conjunction with colleagues at the University of Adelaide's Centre for Distributed and Intelligent Technologies, who are looking at the artificial intelligence side of things. The university's Centre for Defence Communication and Information Networking (CDCIN) has also joined the fray. And the team is partnering with Consilium Technology, a company with experience building and commercialising artificial intelligence-based systems.

~WIA News

MOST ANNOYING WORK EMAILS

1. Not sure if you saw my last email … (25 per cent)

2. Per my last email … (13 per cent)

3. Per our conversation … (11 per cent)

4. Any updates on this? (11 per cent)

5. Sorry for the double email (10 per cent)

6. Please advise. (9 per cent)

7. As previously stated … (9 per cent)

8. As discussed … (6 per cent)

9. Re-attaching for convenience … (6 per cent)

Source: Adobe 2018 Consumer Email Survey

Ham Radio and the Dark Web

An in-site into using "shifty" technology to benefit ham radio

Table of Contents

Preface

I can see the do-gooders and the old beige cardigan wearing fools (you know who you are) now saying "why would you want to mix the two? It's not in the Spirit of Ham Radio"

Its fairly simple really. Anonymity, Security and Access. And in all reality, it is in the spirit of Ham Radio, it is experimenting, it is solving a problem that is continuously giving us grief, can benefit the Ham Community, and costs NOTHING!

How many of us have made this wonderful magic bit of equipment, with a html control front end, shoved a 4g modem onto it so that we can remotely control it, only to find out that Tel$tra et-al have put you behind a public NAT and stopped any access from the outside, making it rather useless to be able to remote control it (think pi-star).

How many times have you had a port 80 (html) or port 22 (ssh) open on your home router for a web page or device, only for it to be smashed by a hacker or bot trying to gain access and gobbling up your bandwidth?

Shifting all your services into the "Dark Web" Solves all of this. Yes, the Dark Web can be a scary place, you can buy drugs, counterfeit credit cards and guns amongst lots of other questionable stuff, all with bitcoin. Being down here in amongst those sites is dangerous, and without a VPN and correctly configured browsers, you WILL get into a lot of trouble.

But as this article is not about visiting those sites, nor is it suggesting to visit them, the default settings for accessing the dark web will be sufficient.

What is the dark web?

The dark web was conceived waaaay back in the 1970's, at the same time as the internet we know today. (called from now on the "clear web"). It was devised by the US navy as a way to use an existing network to send secure, encrypted messages to and from field operatives. And of course as time as gone on, more people (particularly deviants) have utilised the technology to move contraband around the world.

There are several YouTube videos and web pages explaining exactly how the dark web and TOR works and how the messages etc bounce around via relays, being encrypted over and over again each time it bounces. All we have to worry about is, it is secure, and it solves some problems.

Google will NOT work within the dark web, in fact it wont go down there. There are search engines (if you can find them), that claim to have indexed millions of TOR sites. My playing around down there suggests that even though there are millions indexed, that would only be about 10% of what is actually there.

Apart from the contraband listed above, some sites I have found contain instructions etc to build many items, some are even related to radio. It's stuff that might be too questionable to put onto the clear web or the writer wants to remain anonymous because his

experimenting might clash with his employment.

If Bill Cheek (designer of some nifty decoding software) had put his findings on the dark web and not his name on the clear web, he wouldn't have gone to prison….

Traffic in the dark web is slower than the clear web, this is due to the fact the traffic bounces everywhere and is encrypted at every step. You cannot ping, nor find the IP address of a dark web server.

If at this point, the urge to go delving into the dark is great, follow the next steps and have a look. Remember, when you see some places that you disagree with, don't say I didn't warn you. Here is a place to get you started:

ai57a2gkmjr5cfjg66p7zuwe6hlaosmsgmw6tztd4lp4luo25idtivad.onion

Those who need to curl up in a ball in a corner and find their happy place probably should not click that link and stay up in the comfort of the clear web, clicking like on Facebook photos.

Having said that, Facebook has a presence in the dark web, supposedly without logging etc. I'll believe that when I see it: www.facebookcorewwwi.onion/

Accessing the Dark Web

Accessing the dark web isn't as simple as typing "www" into google chrome and hoping you got the address right. If you put an onion address into chrome you get a screen that looks like this:
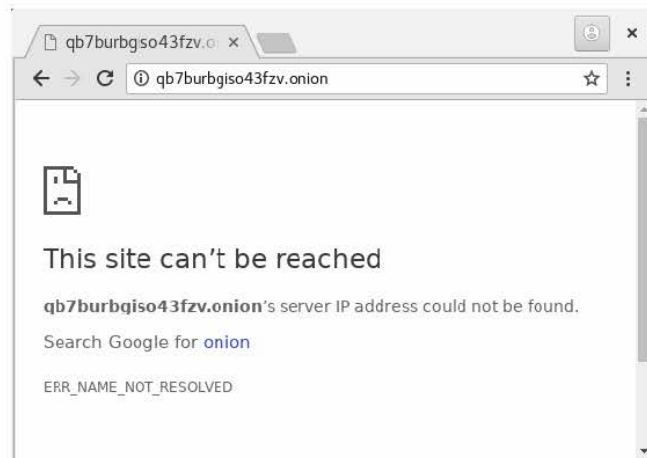
You need to download a TOR browser and associated TOR network access tools. Fortunately the TOR-project has a nicely bundled TOR everything for you to install and use. Point your clear web browser to:

www.torproject.org/projects/torbrowser.html.en

and choose the correct version you want for your operating system.

From here, this article will be focusing on linux, as that is what I use. There are instructions on the clear web to install it on winblows.

Installing the TOR browser

When you have downloaded the file, you need to uncompress it. Put it into your home folder, untar it, then run it. NOT AS ROOT:

```
#  tar zxvf tor-browser-linux64-7.5.6_en-US.tar.xz
#  cd tor-browser_en-US
#  ./start-tor-browser.desktop
```

You will be presented with a screen that looks like this while it is loading and connecting to the dark web:

And voila, a browser on the TOR network:

You can search with duckduckgo, or try some of the links mentioned earlier.

Installing a browser on an Android phone

You need two apps from google play. You need Orbot and Orfox. Orbot does the tor connections, Orfox is the browser. Simply download them from google play and install. The settings may need a little fiddle (ie set to Australia) so you connect to the closest relay.

Due to the security nature of Orfox, it won let screenshots be taken. However Chrome was able to be configured to use TOR and get a screenshot.

Onto the good bits for Ham Radio

Setting up your dark web server

This example is based on the raspberry pi and rasbian jessie (hence pi-star) as this is where most of the ham uses will be.

Log into your pi as root in a shell (log in and type sudo su)

Update the repository and install tor and nginx (nginx is already installed on pistar):

```
#   apt-get update
#   apt-get install tor nginx
```

In nginx, you will have one server instance set up. Maybe you want two. You need to give them two different ports. Edit the nginx config file to set it up:

```
#   nano /etc/nginx/sites-enabled/default
```

You will have the configuration up. You will see a section similar to this. Note this configuration is set up to use the non standard port of 8082 (instead of 80).

```
server {
        listen 8082 default_server;
        listen [::]:8082 default_server;

        root /var/www/tor1;
```

```
        index index.html index.htm index.nginx-debian.html;

        server_name _;

        location / {
                # First attempt to serve request as file, then
                # as directory, then fall back to displaying a 404.
                try_files $uri $uri/ =404;
        }
}
```

Change the 8082 to whatever port you want (not 9050) and make sure the root /var/www/tor1 is a folder that actually exists and is readable and writeable by the user www-data.

If you want two services, duplicate it, changing the port (ie goto 8083) and the folder /var/www/tor2 for example:

```
server {
        listen 8082 default_server;
        listen [::]:8082 default_server;
        root /var/www/tor1;

        index index.html index.htm index.nginx-debian.html;

        server_name _;

        location / {
                # First attempt to serve request as file, then
                # as directory, then fall back to displaying a 404.
                try_files $uri $uri/ =404;
        }

}

server {
        listen 8083 default_server;
        listen [::]:8083 default_server;


        root /var/www/tor2;

        index index.html index.htm index.nginx-debian.html;

        server_name _;

        location / {
                # First attempt to serve request as file, then
                # as directory, then fall back to displaying a 404.
                try_files $uri $uri/ =404;
        }
}
```
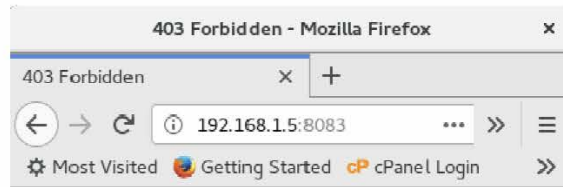
Enable and restart nginx and you should be able to access the site via its IP and port:

```
#   systemctl restart nginx.service
#   systemctl enable nginx.service
```

Unless you have put an index file into /var/www/tor2, you will get exactly the above image. The reason nginx is so good with this is, if you end up with a 404 or 403 page, it does not identify anything other than it is nginx in its standard form – another security bonus.

Setting up the TOR tunnel to your dark web server

Now that your web server is up and running, it is time to set up your tunnel and obtain an onion address.

Edit the torrc file:

```
#   nano /etc/tor/torrc
```

Scroll down to the hidden services section. It will look something like this:

```
HiddenServiceDir /var/lib/tor/hidden_service/
HiddenServicePort 80 127.0.0.1:80
#HiddenServicePort 22 127.0.0.1:22
```

You want to edit it to match your web service created above:

```
HiddenServiceDir /var/lib/tor/hidden_service/
HiddenServicePort 80 127.0.0.1:8083
#HiddenServicePort 22 127.0.0.1:22
```

Where /var/lib/tor/hidden_service folder is the location where TOR stores the site details. This folder should only be accessable by TOR itself. TOR will create it when restarted.

Note the port number in bold matches the port number in your nginx configuration. The front port number is the port you want to access through TOR.

Save the file, enable and restart TOR:

```
#   systemctl enable tor.service
#   systemctl restart tor.service
```

Now if you navigate into the tor hidden service folder, there will be a file called hostname. View this, and the first part is your onion address:

```
#   cat /var/lib/tor/hidden_service/hostname

7m2aihgv75ks63qi.onion
#
```

After a minute or so, your onion address will populate through the dark web, and you will be able to access it from anywhere WITHOUT opening any firewall ports.


This is the basics of setting up a tor service. Unless you tell people your onion address, there is very little chance of anyone ever finding your server. BUT. The rabbit hole goes deeper. There is more we can do to secure it, and there is also more than web site access we can do..........

SSH access to your server

Some of you would have noticed the *#HiddenServicePort 22 127.0.0.1:22* in the torrc file. Take the # out of it and restart TOR.

This opens up the SSH port on the server for you to access. However, it does not allow access through the standard ssh command:
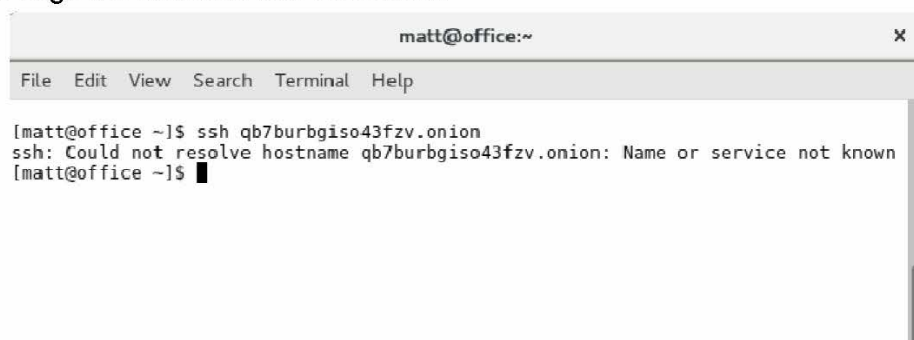
However. here's what we do. We install tor on the PC you are trying to access the ssh server from.

Ubuntu/Debian based installations: *apt or apt-get install tor*

Centos/Fedora based installations: *yum or dnf install tor*

Once TOR is installed, you simply run the command like this:

```
                         matt@vk3vs-node1303: ~                        ×

File   Edit   View   Search   Terminal   Help
[matt@office ~]$ torify ssh qb7burbgiso43fzv.onion
The authenticity of host 'qb7burbgiso43fzv.onion (127.42.42.0)' can't be established.
RSA key fingerprint is SHA256:bLlP2axwihGWz/KwB6SPqaocchqvj1MafMsowXcQASw.
RSA key fingerprint is MD5:7d:0c:44:8a:5b:df:56:e9:86:e8:d7:61:90:51:5b:d7.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added 'qb7burbgiso43fzv.onion' (RSA) to the list of known hosts.
matt@qb7burbgiso43fzv.onion's password:
```

And you're in. Again, no need to open any holes in your router.

Note, all these addresses have been set up purely and simply for this article. They will not exist by the time the article is printed.

SSH is now alive and well in your dark web service.

SSH from your Android Phone

Checking the screenshot of Orbot above, you will notice under Tor-Enabled apps, a command line looking icon. This is ConnectBot SSH. It is available from Google play as well. In Orbot, you have to enable the VPN, then click the settings icon, then select ConnectBot. This will allow it to connect over TOR.


More security……

As you can see in the previous chapter, we can "torify" a command to allow it access through the dark web. Since we can do it, so can a hacker...

A hacker, if he gets hold of your onion address, can torify a port scanner and get it to scan the ports on your dark web server, finding an open port 22. On the clear web, a smart person would have fail-to-ban or similar installed to circumvent this after a couple of tries, and hopefully he gives up and annoys someone else, but in the dark web, everyone who attempts to connect to your dark web server looks the same to the server…. It's part of that anonymity referred to earlier.

So now, we delve into keys. They have to be installed on any client that tries to access your dark web server.

To set up authentication, you need to edit the torrc file on your dark web server again, and add a line to it:
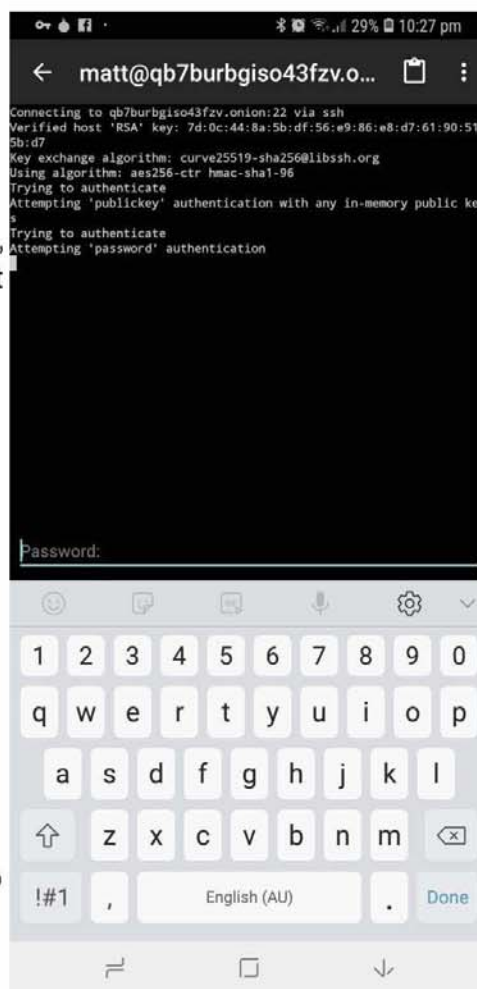
```
HiddenServiceDir /var/lib/tor/hidden_service/
HiddenServicePort 80 127.0.0.1:8083
#HiddenServicePort 22 127.0.0.1:22
```

So it becomes

```
HiddenServiceDir /var/lib/tor/hidden_service/
HiddenServicePort 80 127.0.0.1:8083
HiddenServicePort 22 127.0.0.1:22
HiddenServiceAuthorizeClient stealth hidden_service
```

Save it, and restart TOR.

Now in your /var/lib/tor/hidden_service folder, there will be a couple of keys and a modified hostname file. Cat it:

```
qb7burbgiso43fzv.onion N#@#@#@#@#@#@#@#@#@#@B # client: hidden_service
```

It will show you the address, and the key required for you to access hidden_service, on ANY port. Without the key, the client will just get a timeout message.

Write the key down (it is case sensitive), as you need it put that key onto any client you wish to give access to your dark web server.

As you have two different TOR versions on your client PC (one is installed on your PC and we use it with SSH, the other is bundled with the TOR-browser), we need to install this key in two different places on your PC.

For SSH to work, on your PC, edit the torrc file:

```
#   nano /etc/tor/torrc
```

Go right down to the bottom of the file and add the following:

```
Rest of file…

HidServAuth qb7burbgiso43fzv.onion   N#@#@#@#@#@#@#@#@#@#@B
```

And restart TOR.

For your browser, you have to dig up the torrc file that comes with it. It will be somewhere like *~/tor-browser_en-US/Browser/TorBrowser/Data/Tor/torrc*.

Add the same line to the end of the file and restart the browser.

There it is, a secure interface to control the VK3RWO repeater, which I can access anywhere.
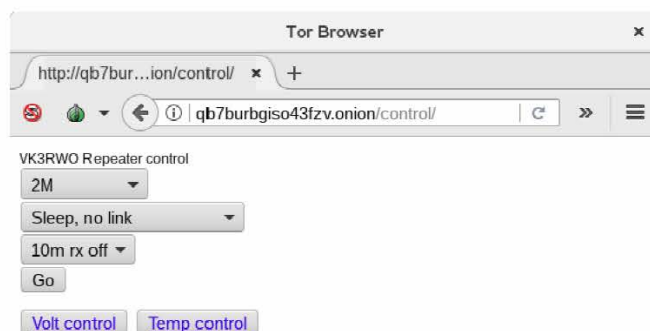
Keys on your Android Phone

Within Orbot, you need to click the 3 dots on the top right, click Hidden Services, then Client cookies. Enter the site and the key…. Restart Orbot. Simple as that!

Upgrading to TOR V3

At the time of writing this, TOR V3 has been released stable. The astute amongst us would have noticed that the address for my website above was 56 characters long vs. 16 characters long for a V2 address.

Note: Upgrading to V3 does not (yet) allow 56 character names on Hidden Auth Services, they still have to be 16 characters long.

If you wish to have the 56 character long onion, you need to either:

- Centos/Fedora, compile TOR from source, or

- Debian/Ubuntu, add repositories and install it.

The following applies to Ubuntu Bionic Beaver (18.04LTS).

In a shell, you need to install apt-transport-https and modify the sources:

```
#   sudo apt install apt-transport-https
#   sudo nano /etc/apt/sources.list
```

Add the following to the bottom of the file and save it:

```
deb https://deb.torproject.org/torproject.org bionic main
deb-src https://deb.torproject.org/torproject.org bionic main
```

Then you need to add the gpg keys to sign the packages, update the repositories and install it, in the shell type:

```
#   gpg2 --recv A3C4F0F979CAA22CDBA8F512EE8CBC9E886DDD89
#   gpg2 --export A3C4F0F979CAA22CDBA8F512EE8CBC9E886DDD89 | apt-key add -
#   apt update
#   apt install tor deb.torproject.org-keyring
```

Make sure its enabled and running:

```
#   systemctl enable tor
#   systemctl restart tor
```

Now to convert your sites to V3 addresses, edit your /etc/tor/torrc, and add the following line:

```
HiddenServiceDir /var/lib/tor/hidden_service/
HiddenServicePort 80 127.0.0.1:8083
#HiddenServicePort 22 127.0.0.1:22
HiddenServiceVersion 3
```

Save the file and restart TOR. Your new address will be in hostname.

If you have *HiddenServiceAuthorizeClient* option on your site, when you restart TOR, it will fail as V3 does not yet support this.

Further investigation

There is only one thing I can see needing further investigation:

- Other Ham uses of the Dark Web.

Summary

This is about as good as you can get for security, anonymity and Access of equipment on the other side of public NAT's and Firewalls. We have created a dark web server, that has:

- No IP address anybody can find.
- A web address that is not publicly accessible on the clear web.
- A way around Public NAT's on 4G connections
- A way around Firewalls.
- No open ports on your router.
- An address that only you will know, if it is found by (a deliberate) accident,
    - You have authentication that only you have the key to
- An address that you don't pay for
- You're able to change that address if something goes horribly wrong with the address your using.
- Not paying for a VPN
- You don't have any hassles if your IP address changes, TOR will repopulate

The downside, its slower than the clear web.

A Parting thought

As I mentioned earlier, "think pi-star", I thought I'd leave these couple of photos as food for thought.

Here is a Raspberry Pi 3b, an MMDVM board, and an Optus 4G modem with an "extra" data sim that is attached to my mobile plan. Optus will not give public IP addresses to personal plans, and as a result, this device is behind a Public NAT.

Note, there is NO cable plugged into the LAN port of the Pi.

This is the start of the MultiMode VK3RWO repeater...

This is the start of the MultiMode VK3RWO repeater…

Getting the 4G modem to work on a command line Pi without user interaction is an article on its own……

Here is the proof in the pudding. The Pi-star interface is accessible over the 4G network, behind a public NAT, as a TOR hidden service on the dark web with Client Key protection. What more do you want?

`

~Matt VK3VS

DECEASED ESTATES ~ Brenton VK3CM

Hi From Brenton VK3CM.

One of the most susceptible areas for a wife of an Amateur radio operator is the unfortunate death of their partner. Too often, this comes when we least expect it. We have all heard stories over the years of someone who swooped in and bought the whole estate for $500 due to the wife not being in a great state of mind and not having a clue what equipment is worth.

This type of disreputable behaviour has been curtailed quite a bit in recent times as each State of Australia has really taken notice of the needs of an operator's wife and devised a number of very good ways to ensure that the estate is sold for a fair value. Some time ago, I started being approached in relation to deceased estates and it was no secret that I was also an avid collector, so I weighed up heavily if this was a smart area to be involved in as it could be a conflict of interest.

More and more, estates were coming my way, and I finally decided, ok, we need a system where the estate owner knows that every cent achieved is being seen in the account of the widow. It was simple in the end, don't pay me, pay the account details for the widow that we had on hand. Even the buyer is more comfortable with this arrangement as there is no suspicion of any underhanded commissions or advantages.

Just recently, I had a lady on the phone and I will keep this anonymous for the moment, and she was grief stricken and really just wanted a good home for her husband's equipment. Her husband didn't have a great deal of equipment as he was an ex portable operator but as I said to her, we will get you the best money for what he has and we went to work. One of the great things about being a collector(Samantha says hoarder) is that I have a phone list of just about every Amateur radio operator around the country and what their desires are, so off to the phone list I went. In less than 2 hours, we had raised her way above what she ever imagined and she couldn't believe that our club did not want payment of any kind. The sale involved 4 states of Australia.

Each party sent Direct Deposits through to the widow of the deceased operator and I arranged all the shipping and ensured that all Amateurs received what was paid for.

I must add that my inspiration for doing this was shortly after watching and participating in the Wagga Wagga Amateur Radio Club Auction where I spent just over $4000 on things that I really wanted to grab for my own personal collection. Often this is uncomfortable, but it doesn't need to, you just have to remember when you're buying that it's for a good cause. I tried to keep in the back of my mind during this auction, pay a fair value.

So the easiest way was to start the bidding at somewhere near that fair value. In some cases, I would even forgo a piece of equipment as I wanted to ensure all were involved, as long as it was a fair price, otherwise, I would bump up the price to ensure it was achieved. In all honesty, the Wagga Wagga club has so many good spirited members, collectively a good amount of money was raised and it's fair to say, all who participated were in fact, doing a good deed to assist the widow with funeral costs.

The Wagga Wagga Club President, John Eyles watched my strategy and was kind enough to issue a mention of thanks to myself in their newsletter and it was very specific in identifying that fair prices were paid by all who attended and this ensured that the Auction was a success.

That was very kind of John, however it got me thinking, on behalf of NEVARC, we can do similar, and I now have handled 4 estates successfully, some even by remote control, so I never see the equipment, but I have been in the game long enough to know what is valuable and what is junk. I also have utilised people in the state of origin of the equipment to do some quick testing to ensure the buyer is protected in these cases.

I do pity Samantha when I die; my good mate Rob VK2QR has the enormous task of fulfilling my role with over 650 radios to dispose of, but let's not hope that's needed too soon. My son Riley VK3FRSK keeps saying that he will take over the museum, but he has not been introduced to girls as yet, somehow his interest may take a left turn.

Below is a short note that I felt was just beautiful from the wife of the last deceased estate we finalised. I loved working with her, mainly because its a lot more about how she is handling life with the absence of her husband, its equally important to be a good listener as much as evaluate the dollars that can be achieved in the equipment. Notes received like the beautiful letter below are just satisfaction enough, she writes so beautifully in her response to our part of the job that was now finished.

Hi, Brenton,

Just letting you know that the money is in my account this morning, and that I am very grateful everything went so smoothly.

Thank you so much once again for your very kind assistance in this matter. It is truly appreciated. It is wonderful to see that, in this crazy, callous and corrupt world in which we are living, there are still good and altruistic people such as yourself out there, people who really make a difference and restore one's faith in humanity. I know Kenny would have shared my feelings in this regard.

I wish you all the very best for the future.

Blessings to you and your family.

(Name withheld) x

One of my background areas due to previous employment with Community and Family Services in South Australia and Cavan Training Centre (Youth Detention) is dealing with people with grief and the many side issues that come with the loss of many areas of their life, be it incarceration of a partner to the worst being the death of a partner.

A great deal of you have not known of a lot of my past working and studying in areas of humanities and psychological science but it has been a great asset not just in the workforce, but in dealing with many new people and the tragedies they have to deal with in life. We all try to avoid these issues, and this is natural, part of this comes back to what we describe as a persons temperament.

We block this into 4 categories, and whilst you may not be happy to be categorised, we all have differences that put us in at least one, and more often a section of two of the four temperaments.

Briefly, do an experiment on yourself, where do you fit in, read the descriptions and ponder, am I one specific temperament, oh, no, I see two, if you see three, your part of a very rare group and four, book some time to see me professionally. Just kidding.
(On that subject, studies in Psychological Science do not make you a Psychologist I'm sorry to say, an internship must follow etc, so I couldn't legally charge you...bummer.)

However, examining why we do what we do, what we feel when things happen, how we handle stress, pain, both physical and mental, are just signs that we are normal, and we are all different.

Below is a summary of the 4 temperaments I stole of the interweb, due to time restraints, but it is very accurate.. This is for you to look at and tick at least one box, maybe two in a few minutes. Take a break from answering the questions of what boxes you fit as you will be asked to examine them one more time in the proceeding paragraph. This is followed by a few last comments in regards to the Psychology of an Amateur radio operator.

If we are honest in our self examination, our conclusion may possibly be, we are simply a strange bunch, writer included.

Sanguine

Strengths	Weaknesses
-sociable	-impulsive
-charismatic	-chronically late
-outgoing	-shamless
-confident	-forgetful
-warm-hearted	-a compulsive talker
-pleasant	-too loud
-lively	-sometimes too happy
-optimistic	-distractible
-a fun lover	-not interested in following
-spontaneous	through with tasks that are
-a preventer of	boring
dull moments	-self-absorbed
-a quick apologizer	-an exaggerator
-an easy friend maker	-someone who appears
	unauthentic

Choleric

Strengths	Weaknesses
-ambitious	-agressive
-passionate	-domineering
-leader-like	-inflexible
-focused	-impatient
-efficient	-rude and tactless
-practical	-argumentative
-good at planning	-unable to relax
-good at problem	-uncomfortable around
solving	emotion
-confident	-low on empathy
-motivating	-discouraged by failures
-a delegator	-too busy for people
-usually right	-intolerant
-great in an emergency	-a leader who demands
	loyalty

Phlegmatic

Strengths	Weaknesses
-relaxed	-sometimes shy
-quiet and calm	-fearful of change
-content with themselves	-prone to laziness
-kind	-stubborn
-consistent	-passive-agressive
-a steady and faithful friend	-indecisive
-accepting	-permissive
-affectionate	-not goal oriented
-diplomatic	-unenthusiastic
-peacemaking	-too compromising
-rational	-undisciplined
-curious	-sarcastic
-observant	-discouraging
-an easy friend maker	-non-participative

Melancholic

Strengths	Weaknesses
-thoughtful	-obsessive
-considerate	-too cautious
-cautious	-prone to depression
-organized	-prone to moodiness
-an excessive	-perfectionistic
planner	-pessimistic
-schedule oriented	-difficult to please
-detailed	-deeply affected
-highly creative in	by tragedy
poetry, art	-a person with tunnel vision
and invention	-sometimes a procrastinator
-independent	-discontent with themselves
-good at preventing	and others
problems	-prone to play the martyr

hidingplaceblog.blogspot.com

Now the trick is to not be too hard on yourself, but be honest as well.

There is a well known theory about Amateur radio operators and their constant relationship with RF.
Did you know, back when Radio Australia was being built, there were 30 radio inspectors all involved in this variable high power 50-500 kilowatt transmitter. Now at 50kw where the transmitter was often set at, and EMR was a calculated measurements in those days that could take half a day of working on til a figure was derived, strange things happened.

It is of note to mention that all the radio inspectors who were relatively young with young wives, had babies. Now that's not the point, there was no immaculate conception, but what was staggering was that all 30 had baby girls.

Later on this theory which most of us laughed at spread to Police Communication centres all around Australia and Radio Techs who came into contact with high power RF all seem to be having girls.

Now what does this have to do with your temperament, absolutely nothing as I now want you to quickly choose, whether it be one box or two, and then commit.

The exercise is always different for most people, ahhh but a psychological survey done in the 1990's by a leading Ham radio Psychologist actually found after questioning 500 American hams that there were some very interesting and relevant parts of how the Ham radio operator brain worked.

He wrote a paper I studied some time back and it showed how defined we are as Amateur radio operators, and that his results could even be true world wide. I am not going to do the work for you, but your own self examination is often an eye opener as to how, getting back to deceased estates, we handle grief and tragedy.

It is so important that we not only be there for Amateur radios wives monetarily, but also to be able to be compassionate and kind on what is most certainly, the worst day they ever imagined having.

It always easy to say, its not my problem, however, the opposite could not be more based in truth.
Its a great sign of empathy to feel that persons pain and help by supporting them through their grief period as a healthy alternative.

One thing is for certain, we will all face this in one shape or form at some stage of our life, whether it is your spouse, mother, father, brother, sister and the list goes on.

How we act in times of tragedy defines us, more than people would ever realise.
Living with regret is one of the areas we have come to believe is a very unhealthy option.

Medically, there are so many studies now that prove that a positive mental attitude and really a don't get caught up in the small stuff is a lifestyle we all should adopt.

As Amateur Radio operators, with the comfort of often being able to talk distanced by radio communications as the medium versus face to face, its easy for subject matters to get heated and given way too much exposure.

I can only advise what some of the best minds in the world have adopted as practical proven methodology, and its very complex, its

"Don't Sweat The Small Stuff"

Whilst this article is provided to inform you that the best attempts are being made to ensure the widows of our mates who pass on are looked after in regards to deceased estates, its conveniently also about self reflection as well.

So be kind to one another.

Its a great life we lead in this beautiful country and together, helping each other, watch how much better it can get.....

Cheers

Brenton VK3CM

Shepparton Hamfest Report

Summer is on the way along with more Hamfest gatherings all over the state.
Mick VK3CH decided to try Shepparton out again this year.
The day looked cloudy but the sunshine prevailed, a 6am start of driving from Melbourne saw the tables all setup by 9am.
Another box or so of junk did not go home, so a bit more room for me, about four more Hamfests should just about clear the junk out.

The pictures tell the story…

4 SN NEWS

Swap time: Shepparton's Andy Ashley at the HAMFEST swap meet.

Face-to-face meet: Andy Ashley and South Australia SES's Frank Woolfe met at the swap meet after talking via HAM radio.

Rare find: Melbourne's Mick Ampt holds a rare piece of equipment.

Enjoying the meet: Shepparton and District Amateur Radio Club's Geoff Angus.

Role still for radio

RARE RADIO FINDS AT SWAP MEET

By Tara Whitsed

Amateur radio enthusiasts from across the state came together on Sunday for Shepparton and District Amateur Radio Club's swap meet.

Club secretary Andy Ashley said the meet had been held annually for the past 30 years.

"Pretty well every town in Australia has a HAM radio technician," he said.

"In the Shepparton CBD alone there are five."

Mr Ashley said there would be about 3000 to 4000 HAM radio operators across the country and it had been a hobby for more than 100 years.

Described as the original social media, he said the club was working hard to encourage young people to become involved.

"It encourages young people to think about how they work," Mr Ashley said.

He said a Melbourne-based group recently succeeded in getting a school principal to add HAM radio to the curriculum as an elective subject.

Mr Ashley said HAM radio played an important role in times of natural disasters.

"When everything goes down, the HAM radio still works," he said.

The swap meet attracted enthusiasts to St Augustine's hall, Shepparton, where Azem Elmaz was also there with his food truck.

"Thanks to Azem for catering the event where all funds raised will go to People Supporting People," Mr Ashley said.

On the road: Tabletop's Tom and Monica Sanders travelled to be at the event.

Hunting for items: Nick Presser, Leigh Rainbird, Kane Hinckliffe and Jack Szcsurek.

Time running out on atomic-clock station in Fort Collins

Buried on page 25 of the 2019 budget proposal for the National Institute of Standards and Technology (NIST), under the heading "Fundamental Measurement, Quantum Science, and Measurement Dissemination", there's a short entry that has caused plenty of debate and even a fair deal of anger among those in the amateur radio scene:

NIST will discontinue the dissemination of the U.S. time and frequency via the NIST radio stations in Hawaii and Ft. Collins, CO. These radio stations transmit signals that are used to synchronize consumer electronic products like wall clocks, clock radios, and wristwatches, and may be used in other applications like appliances, cameras, and irrigation controllers.

The NIST stations in Hawaii and Colorado are the home of WWV, WWVH, and WWVB.

The oldest of these stations, WWV, has been broadcasting in some form or another since 1920; making it the longest continually operating radio station in the United States.
Yet in order to save approximately $6.3 million, these time and frequency standard stations are potentially on the chopping block.

What does that mean for those who don't live and breathe radio?
The loss of WWV and WWVH is probably a non-event for anyone outside of the amateur radio world.
In fact, most people probably don't know they even exist.
Today they're primarily used as frequency standards for calibration purposes, but in recent years have been largely supplanted by low-cost oscillators.

But WWVB on the other hand is used by millions of Americans every day.
By NIST's own estimates, over 50 million timepieces of some form or another automatically synchronize their time using the digital signal that's been broadcast since 1963.

Therein lies the debate: many simply don't believe that NIST is going to shut down a service that's still actively being used by so many average Americans.

The problem lies with the ambiguity of the statement.
That the older and largely obsolete stations will be shuttered is really no surprise, but because the NIST budget doesn't specifically state whether or not the more modern WWVB is also included, there's room for interpretation.
Especially since WWVB and WWV are both broadcast from Ft. Collins, Colorado.

~Internet

Have you been wasting your time by pushing the pedestrian button?

IF YOU have secretly suspected pushing the button at a pedestrian crossing does nothing, it turns out you might be onto something.

IF YOU'VE ever repeatedly bashed the pedestrian crossing button, expecting the lights to change soon after and lead you safely towards your destination, you may have been barking up the wrong tree for the past 24 years.
Whether smashing the button has any effect on the lights at all has been the subject of vigorous debate across the county for many years. But the answer varies depending on which state or city you're crossing the road in.

Unfortunately for Sydneysiders, if you've been pressing the button in attempt to speed up the signal change between 7am to 7pm on Monday to Thursday and from 7am to 9pm on Friday — you have been taken for a fool for a long time.
That's because in many parts of the city, the signals during these times are set to "automated pedestrian phases", which means the big clicking button is rendered useless. And, it has been that way since 1994.

It changes slightly on Saturday, when the automated phase is shifted to run from 8.30am to 9pm. However, serial button bashers will be pleased to discover that Sunday is a day when you can really make a difference.
For this special day of the week, the automated phases are disabled and, for the entire day, your button pressing skills will have a direct impact on halting traffic.
A spokeswoman for Transport for NSW said these automated phases run in areas where there is a "high level of pedestrian activity, at specific times of the day".
"These phases are constantly reviewed against demand profiles of road users and other changes that may affect the network," the spokeswoman said.
"Shorter wait times have kept pedestrians moving and could potentially reduce the risk of jaywalking and pedestrian crashes."

The system will also adjust automatic times to account for larger volumes of pedestrians during things like major sporting events.
It comes as the Harbour City looks to cut down on its pedestrian crossing waiting times.

Numerous studies have shown that if pedestrians are forced to wait more than a minute to cross the road, it results in more illegal crossings. In January, the waiting time for cars, bikes and pedestrians in Sydney was cut for the first time ever.

Waiting times dropped from about two minutes to 90 seconds — this should be the absolute maximum time you should wait to cross the road in anywhere in the city. At many crossings in the CBD, there are now "double-phased" lights which slash waiting times for pedestrians down to about 45-55 seconds.
A Transport for NSW spokeswoman told news.com.au these automated phasing crossings were all centred in the CBD, North Sydney and Parramatta. For everywhere else in the state, the general rule is: Pushing the button makes a difference.
However there is still a long way to go for Sydney, as studies show 30 seconds is the optimal time both children and adults are willing to wait before indulging in risky crossing behaviour.
Many major cities across the world are also looking to cut pedestrian waiting times. London, for example has successfully slashed its waiting times at 200 intersections to a maximum of 40 seconds.

HOW DOES IT WORK IN OTHER STATES?

Queensland:

It's all about the timing in the Queensland.
A spokesman for Transport and Main Roads said during busy pedestrian times the signals will run on automatic timing meaning pushing the button doesn't make a difference.
"Outside of these hours, all pedestrian traffic signals require the pedestrian to push the button to activate the pedestrian crossing," he said.

Western Australia:

Pushing the button does matter. A Main Roads WA spokesman said pedestrian crossings are not on an automatic timer.
"When a person activates the pedestrian signal button that interrupts the traffic phase of the signals, incorporating the pedestrian request to cross in the signal phasing," a spokesman said.

Northern Territory:

At the Top End, crossings signal green as part of an automatic cycle, but it's good to push it just to be sure.
"Pushing the button at the crossing will register a request with the signal management system, and will prioritise the pedestrian crossing," a spokesman for the Department for Transport said.

Victoria:

Pedestrians in Victoria get the same deal as the Northern Territory.
VicRoads director of road operations Dean Zabrieszach said pushing the button sends a signal that people are waiting to cross, but it won't make it go green any faster. "The timing of the activation of the green walk sign depends on the flow of vehicle traffic and the status of signalling in adjacent intersections."
ACT:

The ACT has the same system, where pushing the button registers that someone is waiting, and the green man will appear at the next point in the cycle. How long you wait depends on where the intersection is. Some operate in a linked network while others are independent. "Where the intersection is part of a co-ordinated network the wait time varies. Sometimes pedestrians may have to wait for the intersection to run other demanded phases before returning to the phase where pedestrians can cross the intersection" a spokesman said. Wait times at independent intersections depend on the volume of traffic.

Tasmania:

The short answer is yes, pushing the button does make a difference to how long you wait, said a spokeswoman for State Growth.
But it depends where you are. If the traffic light is part of a fixed plan, the green man will appear based on an automatic cycle.
At off-peak times and non-work days the green man only appears if you push the button. Wait times depend on how busy the intersection is. But most importantly, State Growth confirmed: "The myth of rapidly pushing the button to quickly call the pedestrian green man, is just a myth."

South Australia:

In South Australia, a computerised system runs pedestrian crossing sequences.
"In the CBD, some traffic signals go into the pedestrian phase automatically. This occurs at busier intersections between 6am and 10pm, seven days a week," a spokeswoman for the Department of Planning, Transport and Infrastructure said.
The wait time will vary depending on how busy the road is and when the button is pushed. Some places, like pedestrian areas or shopping zones, have reduced wait times outside peak hours to give walkers priority as well.

~Internet

NEVARC Nets

40M Net
Monday, Wednesday and Fridays
10am Local time (East coast)
7.095 MHz LSB
Hosted by Ron VK3AHR
Using club call VK3ANE

80M Net
Wednesday 20:30 Local time
3.622 MHz LSB
Hosted by Ron VK3AHR
Using the club call VK3ANE

2M Nets
Monday at 2000 local time on
VK3RWO repeater
146.975 MHz

Ballarat Amateur Radio Group Hamvention

BARG Hamvention 2018 will be held on

Sunday the 28th of October

The BARG Hamvention 2018 will be held at the Ballarat Greyhound Racing Club
which is located at the corner of Rubicon and Sutton Streets, Ballarat. 3350. (Next to the Trotting Track)

Lat -37.580618, Long 143.83024

Sunday:

* Doors open at 10:00 am

* Entry is $7.00

* There will be trade displays from the usual traders

* The usual and popular pre-loved equipment displays and sales.

For information and bookings, contact Hamvention Coordinator

hamvention2018@barg.org.au
Or
BARG on the web www.barg.org.au

Two-way radio clipped to molar is set to boost battlefield communications

The US air force has chipped in $10 million to develop a virtually invisible, hands-free 'Molar Mic' that fits onto a soldier's tooth.

The days of hauling a bulky two-way radio through military deployments could become a thing of the past, with a hands-free communication device which soldiers can carry in their mouth.
The US air force has joined forces with California-based company Sonitus Technologies to develop the 'Molar Mic' — a personal communication system that replaces the traditional two-way radio and allows you to hear without actually using your ears.
The US government has committed about $10 million to manufacture and distribute the devices that could revolutionise battlefield communications.

The encrypted, wireless device is small in size and able to withstand harsh weather conditions.
The mic simply clips to the user's back tooth and transmits sound using bone matter.
A statement released by Sonitus claimed the Molar Mic is embedded with a tiny microphone and speaker transducer for hearing in a "compact, custom-fit mouthpiece that snaps comfortably around a user's back teeth".
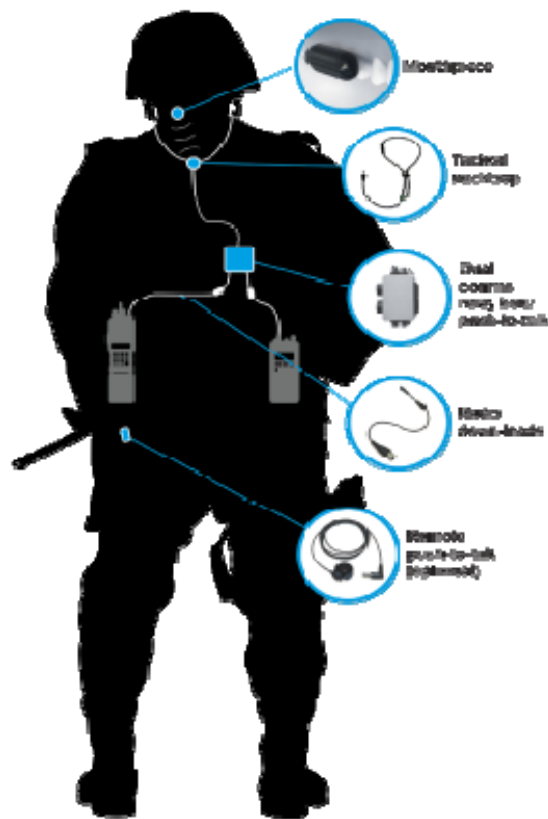
Incoming sound is transmitted through the user's teeth and jawbone to auditory nerves.

Outgoing sound is sent to another small transmitter which hangs from the user's neck and can be sent anywhere.

"The result is an unobstructed head and face, clear communication, higher comfort, enhanced situational awareness and the ability to add or remove personal protective equipment without breaking communication," the statement said.

Sonitus chief executive Peter Hadrovic said the Molar Mic was a game changer in military technology and would make soldiers "safer and more effective by enabling them to communicate clearly — even in the most extreme situations".

"The voice interface sustains communications in dangerous and challenging environments," he said.
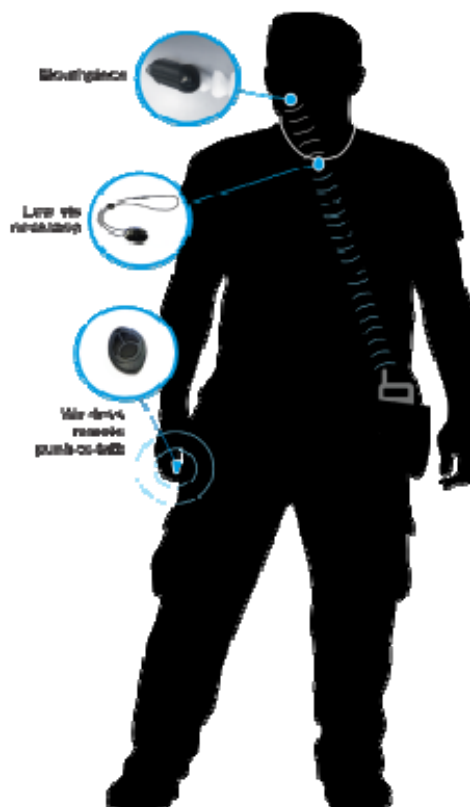
Speaking to military website Defence One, Mr Hadrovic explained that the brain adjusts to comprehending conversations which are transmitted through bone over time. "Over the period of three weeks, your brain adapts and it enhances your ability to process the audio," he said.

~Internet

President, VK2VU, Gary
Vice President, VK3CM, Brenton
Secretary, VK2FKLR, Kathleen
Treasurer, Amy

NEVARC CLUB PROFILE

History

The North East Victoria Amateur Radio Club (NEVARC) formed in 2014.
As of the 7th August 2014, Incorporated, Registered Incorporation number A0061589C.
NEVARC is an affiliated club of the Wireless Institute of Australia.

Meetings

Meetings details are on the club website, check for latest scheduled details.
Meetings held at the Belviour Guides Hall, Silva Drive West Wodonga.

VK3ANE NETS

HF

7.095 MHz Monday, Wednesday, Friday - 10am Local time
3.622 MHz Wednesday - 8.30pm Local time

VHF

VK3RWO Repeater 146.975 MHz – Monday - 8pm Local time
All nets are hosted by Ron Hanel VK3AHR using the club callsign VK3ANE

Benefits

To provide the opportunity for Amateur Radio Operators and Short Wave Listeners to enhance their hobby through interaction with other Amateur Radio Operators and Short Wave Listeners. Free technology and related presentations, sponsored construction activities, discounted (and sometimes free) equipment, network of likeminded radio and electronics enthusiasts. Excellent club facilities and environment, ample car parking.

Website: **www.nevarc.net.au**   **Postal:**   **NEVARC Secretary**
                                                                          PO Box 69
                                                                          Wahgunyah Vic 3683